

1                   **WE CLAIM:**

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3                   1. A method of treating a flexible multi-layer member exhibiting a glass  
4                   transition temperature and including a surface layer, the method comprising:

5                   moving the member through a member path comprising: a contact zone defined  
6                   by contact of the member with an arcuate surface including a curved contact zone  
7                   region; a pre-contact member path before the contact zone; and a post-contact member  
8                   path after the contact zone;

9                   heating sequentially each portion of the surface layer such that each of the  
10                  heated surface layer portions has a temperature above the glass transition temperature  
11                  while in the curved contact zone region; and

12                  cooling sequentially each of the heated surface layer portions while in the  
13                  contact zone such that the temperature of each of the heated surface layer portions falls  
14                  to below the glass transition temperature prior to each of the heated surface layer  
15                  portions exiting the curved contact zone region, thereby defining a cooling region,  
16                  wherein the heating is accomplished in a heating region encompassing any part or all of  
17                  the contact zone outside the cooling region and a portion of the pre-contact member  
18                  path adjacent the contact zone.

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20                  2. The method of claim 1, wherein the heating raises each of the heated surface  
21                  layer portions to a temperature ranging from about 5 to about 40 degrees C above the  
22                  glass transition temperature.

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24                  3. The method of claim 1, wherein the cooling lowers each of the heated  
25                  surface layer portions to a temperature at least about 20 degrees lower than the glass  
26                  transition temperature.

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28                  4. The method of claim 1, wherein the cooling lowers each of the heated  
29                  surface layer portions to a temperature at least about 40 degrees lower than the glass  
30                  transition temperature.

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32                  5. The method of claim 1, wherein the member is a web or a belt.

1           6. The method of claim 1, wherein the cooling comprises transferring heat  
2 away from the member via heat conduction through the arcuate surface and via heat  
3 convection to ambient air.

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5           7. The method of claim 6, wherein the cooling further comprises transferring  
6 heat away from the member via heat conduction or heat convection to a coolant.

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8           8. The method of claim 6, wherein the cooling is accomplished without  
9 transferring heat away from the member via heat conduction or heat convection to a  
10 coolant.

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12           9. The method of claim 1, wherein the arcuate surface is non-rotatable.

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14           10. The method of claim 1, wherein the arcuate surface rotates.

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16           11. The method of claim 1, wherein the contact zone further includes two  
17 straight contact zone regions and therebetween the curved contact zone region.

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19           12. The method of claim 1, wherein the member contacts the arcuate surface at  
20 a wrap angle ranging from about 30 to about 350 degrees.

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22           13. The method of claim 1, wherein the member contacts the arcuate surface at  
23 a wrap angle of about 180 degrees.

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25           14. The method of claim 1, wherein the surface layer exhibits the glass  
26 transition temperature.

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28           15. The method of claim 1, wherein the member includes a layer adjacent to  
29 the surface layer that exhibits the glass transition temperature and the surface layer  
30 exhibits a different glass transition temperature.

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32           16. The method of claim 1, wherein the member is moved at a constant speed  
33 through the contact zone.

1           17. The method of claim 1, wherein the member is moved at a non-constant  
2           speed through the contact zone.

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4           18. The method of claim 1, wherein the member further includes an additional  
5           layer,

6           wherein due to heat conduction within the member, the heating sequentially of  
7           each portion of the surface layer also causes heating sequentially of each portion of the  
8           additional layer such that each of the heated additional layer portions has a temperature  
9           above the glass transition temperature while in the curved contact zone region,

10           wherein due to heat conduction within the member, the cooling sequentially of  
11           each of the heated surface layer portions also causes cooling sequentially of each  
12           portion of the additional layer such that the temperature of each of the heated  
13           additional layer portions falls to below the glass transition temperature prior to each of  
14           the heated additional layer portions exiting the curved contact zone region.

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19           19. A method of treating a flexible imaging member comprised of in the  
20           following sequence a substrate layer, a charge generating layer, and a charge transport  
21           layer wherein the charge transport layer exhibits a glass transition temperature, the  
22           method comprising:

23           moving the member through a member path comprising: a contact zone defined  
24           by contact of the member with an arcuate surface including a curved contact zone  
25           region; a pre-contact member path before the contact zone; and a post-contact member  
26           path after the contact zone;

27           heating sequentially each portion of the charge transport layer such that each of  
28           the heated charge transport layer portions has a temperature above the glass transition  
29           temperature while in the curved contact zone region; and

30           cooling sequentially each of the heated charge transport layer portions while in  
31           the contact zone such that the temperature of each of the heated charge transport layer  
32           portions falls to below the glass transition temperature prior to each of the heated  
33           charge transport layer portions exiting the curved contact zone region, thereby defining  
34           a cooling region, wherein the heating is accomplished in a heating region encompassing  
                 any part or all of the contact zone outside the cooling region and a portion of the pre-  
                 contact member path adjacent the contact zone.

1                   20. The method of claim 19, wherein the member is moved at a constant speed  
2 through the contact zone.  
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